



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,287	01/02/2002	Yasuyuki Kawahara	011731	1458
23850	7590	01/21/2004	EXAMINER	
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP			OH, TAYLOR V	
1725 K STREET, NW			ART UNIT	
SUITE 1000			PAPER NUMBER	
WASHINGTON, DC 20006			1625	

DATE MAILED: 01/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

### Office Action Summary

Application No.

10/019,287

Applicant(s)

KAWAHARA ET AL.

Examiner

Taylor Victor Oh

Art Unit

1625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 1-5, 12-18 and 31-33 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-10 is/are allowed.
- 6) ☒ Claim(s) 11, 19 and 30 is/are rejected.
- 7) ☒ Claim(s) 20-29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1/2/02.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

The Status of Claims :

Claims 1-33 are pending.

Claims 11 ,19, and 30 have been rejected.

Claims 1-5, 12-18, and 31-33 have been withdrawn.

Claims 20-29 have been objected.

Claims 6-10 are allowable.

**DETAILED ACTION**

1. Claims 6-11 and 19-30 have been under consideration.

**Priority**

2. This application is a 371 of PCT/JP00/04838 filed on 07/19/2000.

**Drawings**

3. None.

***Election/Restrictions***

Applicant's election with traverse of Group III (claims 6-11 and 19-30 ) on 10/24/2003 is acknowledged. Claims 1-5, 12-18, and 31-33, drawn to the various heterocycles withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to the nonelected Groups I and II, there being no allowable generic or linking claim. Election was made **with** traverse on 10/24/2003.

Applicants argue in the followings: unity of invention was recognized in the IPE report according to PCT rule; the state of the art in refrigerating oils ( Group II claims) due to the banning of old refrigerating oils containing CFC's ; the special technical feature is the general formula of the ester compounds; and undue diverse searching is not required.

In response to applicants' argument, the Examiner has noted applicants' argument. However, first, with respect to the PCT rule, when it is during the national stage, the requirements of PCT Rule 13.1 and 13.2 are applied to the case as shown below.

### THE REQUIREMENT FOR "UNITY OF INVENTION"

Any international application must relate to one invention only or to a group of inventions so linked as to form a single general inventive concept (PCT Article 3(4)(iii) and 17(3)(a), PCT Rule 3.1, and 37 CFR 1.475). Observance of this requirement is checked by the International Searching Authority and may be relevant in the national (or regional) phase.

The decision in *Caterpillar Tractor Co. v. Commissioner of Patents and Trademarks*, 231 USPQ 590 (E.D. Va. 1986) held that the Patent and Trademark Office interpretation of 37 CFR 1.141(b)(2) as applied to unity of invention determinations in international applications was not in accordance with the Patent Cooperation Treaty and its implementing regulations. In the Caterpillar international application, the USPTO acting as an International Searching Authority, had held lack of unity of invention between a set of claims directed to a process for forming a sprocket and a set of claims drawn to an apparatus (die) for forging a sprocket. The court stated that it was an unreasonable interpretation to say that the expression "specifically designed" as found in former PCT Rule 13.2(ii) means that the process and apparatus have unity of invention if they can only be used with each other, as was set forth in MPEP § 806.05(e).

Therefore, when the Office considers international applications as an International Searching Authority, as an International Preliminary Examining Authority, and during the national stage as a Designated or Elected Office under 35 U.S.C. 371, PCT Rule 13.1 and 13.2 will be followed when considering unity of invention of claims of different categories without regard to the practice in national applications filed under 35 U.S.C. 111. No change was made in restriction practice in United States national applications filed under 35 U.S.C. 111 outside the PCT.

In applying PCT Rule 13.2 to international applications as an International Searching Authority, an International Preliminary Examining Authority and to national stage applications under 35 U.S.C. 371, examiners should consider for unity of invention all the claims to different categories of invention in the application and permit retention in the same application for searching and/or preliminary examination, claims to the categories which meet the requirements of PCT Rule 13.2.

PCT Rule 13.2, as it was modified effective July 1, 1992, no longer specifies the combinations of categories of invention which are considered to have unity of invention. Those categories, which now appear as a part of Annex B to the Administrative Instructions, has been substituted with a statement describing the method for determining whether the requirement of unity of invention is satisfied. Unity of invention exists only when there is a technical relationship among the claimed inventions involving one or more special technical features. The term "special technical features" is defined as meaning those technical features that define a contribution which each of the inventions considered as a whole, makes over the prior art. The determination is made based on the contents of the claims as interpreted in light of the description and drawings. Annex B also contains examples concerning unity of invention.

#### A. Independent and Dependent Claims

Unity of invention has to be considered in the first place only in relation to the independent claims in an international application and not the dependent claims. By "dependent" claim is meant a claim which contains all the features of another claim and is in the same category of claim as that other claim (the expression "category of claim" referring to the classification of claims according to the subject matter of the invention claimed, for example, product, process, use or apparatus or means, etc.).

If the independent claims avoid the prior art and satisfy the requirement of unity of invention, no problem of lack of unity arises in respect of any claims that depend on the independent claims. In particular, it does not matter if a dependent claim itself contains a further invention. Equally, no problem arises in the case of a genus/species situation where the genus claim avoids the prior art. Moreover, no problem arises in the case of a combination/subcombination situation where the subcombination claim avoids the prior art and the combination claim includes all the features of the subcombination.

If, however, an independent claim does not avoid the prior art, then the question whether there is still an inventive link between all the claims dependent on that claim needs to be carefully considered. If there is no link remaining, an objection of lack of unity (that is, arising only after assessment of the prior art) may be raised. Similar considerations apply in the case of a genus/species or combination/subcombination situation.

This method for determining whether unity of invention exists is intended to be applied even before the commencement of the international search. Where a search of the prior art is made, an initial determination of unity of invention, based on the assumption that the claims avoid the prior art, may be reconsidered on the basis of the results of the search of the prior art.

Therefore, if there is lack of unity of invention, the restriction is properly applied to the case.

Second, regarding the second, third, and fourth arguments, the issue is not related to the banning of old refrigerating oils containing CFC's, but to the possibility of making the refrigerating oils containing CFC's. According to Bishop et al (US 2,552,084), the refrigerator lubricating oil composition may contain mineral oil, a halogenated hydrocarbon, and an ethylene oxide. From this, it follows that the refrigerator lubricating oil composition does not require the presence of the ester compounds and alicyclic dicarboxylic acid diesters. Group I is not the special technical feature required in making the refrigerator lubricating oil composition. There is no single general inventive concept and no unity of invention for the method or the process as defined in 37 CFR 1.475. Furthermore, the search is a burden whether or not they are so closely related to their searches.

### ***Claim Rejections - 35 USC § 112***

Claims 11, 19, and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 11 and 30, the phrase "the non-sulfonic acid type" is recited. However, the word "type" is indefinite and vague as to what type of non-sulfonic acid is referred.

In claim 19, the phrase "if desired" is recited. However, the specification did not specify the condition of "if desired." Therefore, this expression is indefinite and vague as to what type of the condition is referred. Therefore, an appropriate correction is required.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 19 in line 17 on page 229 recites the broad recitation that "R<sup>5</sup> is a cycloalkyl group having 3 to 10 carbon atoms", and the claim also recites that "particularly, R<sup>5</sup> is a straight-chain alkyl group having 1 to 5 carbon atoms" which is the narrower statement of the range/limitation.

Furthermore, claim 19 in line 1 on page 233 recites the broad recitation, "alcohol component 1", and the claim also recites that "namely, a single alcohol or alcohol mixture comprising a monohydric alcohol having 1 to 5 carbon atoms(P) and a monohydric alcohol having 6 to 18 carbon atoms(Q) " which is the narrower statement of the range/limitation.

Moreover, claim 19 in line 18 on page 233 recites the broad recitation, "alcohol component 2", and the claim also recites that "namely, a single alcohol or alcohol

mixture comprising a monohydric alcohol having 1 to 5 carbon atoms (S) and a monohydric alcohol having 6 to 18 carbon atoms (T) “ which is the narrower statement of the range/limitation. Those narrower limitations can be rearranged to the dependent claims. Therefore, an appropriate correction is required.

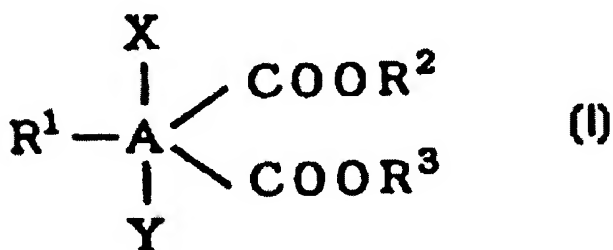
Claims 20-29 are objected to as being dependent upon the rejected base claim 19.

***Allowable Subject Matter***

In the event of amending the rejected claims and the cancellation of the non-elected groups in the above according to the Examiner's suggestions, the elected claims can be allowable.

The following prior art are not used in the rejection of the claimed inventions, but, they are close to the claimed invention.

Kawahara et al (WO/97/21792) discloses a lubricating oil containing an ester of an alicyclic polycarboxylic acid represented by a general formula obtained from the reaction of an alcohol and a carboxylic acid in an inert gas atmosphere, polycarboxylic acid represented by general formula (1) obtained from the reaction of an alcohol and a carboxylic acid in an inert gas atmosphere



, wherein A represents a cyclohexane or cyclohexene ring, R' represents hydrogen or a methyl group, X represents hydrogen or COOR<sup>4</sup>, Y represents hydrogen or COOR<sup>5</sup> and R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> represent each a branched alkyl group having 3 to 18 carbon atoms. This lubricating oil is suitable for a refrigerator.

Furthermore, the reaction takes place in the presence of titanium oxide and an excess of raw materials can be removed from using an activated carbon.

In addition, according to table 6, the resultant product may have a total acid number of 0.05 mgKOH/g or less. And also, the resultant product may have a volume resistivity of  $2 \times 10^{13}$  ohm.cm or more.

The instant invention, however, differs from the prior art in that a sulfated ash, sulfur, phosphorous, water content, a peroxide, carbonyl, and hydroxyl value are unspecified; the neutralizing and dehydrating steps are also unspecified.

Kondo et al (US 5,342,533) discloses a refrigerator oil composition containing an diesters obtained from the esterification of phthalic acid and phosphate content of 5.0 to 90%, but there is no disclosure regarding other contents such as a sulfated ash, sulfur, water content, a peroxide, carbonyl, and hydroxyl value.

Therefore, the claimed subject matter would not have been obvious over the prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Taylor Victor Oh whose telephone number is 703-305-0809. The examiner can normally be reached on 8:30-5:00.

Application/Control Number: 10/019,287  
Art Unit: 1625

Page 10

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alan Rotman can be reached on 703-308-4698. The fax phone number for the organization where this application or proceeding is assigned is 703-308-2742.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1235.

*Myh ✓ Jh*  
*11/14/04*

*D. Margaret Seaman*  
D. MARGARET SEAMAN  
PRIMARY EXAMINER